"SIRP" EZ FX *By Ed Truthan*

Contents

Introduction

The "sirp_ez_effects.bgl" contains 11 effects originally designed for use with the "Stikine Icefield Research Program" freeware addon for the remarkable Alaskan scenery package "Tongass Fjords" by Holger Sandmann, and can be used to place effects in Flight Simulator with Abacus' EZ-Scenery software. There are four smoke effects (3 of which have two variations), and four blowing snow effects, one of which is meant for placement at the top of snowy ridges and peaks to emulate snow blown from their summits. The smoke effects all have fire at their emitter points which incorporate a 16 frame looping bitmap animation, designed to emulate an open flame.

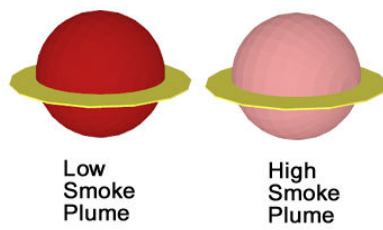## The Effect "Placement Orb"

Since effects placed by the EZ-Scenery program cannot be seen until FS is restarted, accurate placement can be tricky and often time consuming. Thus, each EZ effect has therefore been affixed with a "placement orb" to help facilitate placement (see pages 2 and 3). These orbs are only visible when the year is set to **2100 AD**. Each has a specific color for easy recognition during placement or editing. Each also has a yellow ring running around it's equatorial waist to more accurately mark the mid-point of the orb. This is very helpful when setting a precise emitter elevation with a side view, or general elevation positioning from an oblique angle of view. The emitter for each effect resides at the exact center of its orb, so setting an elevation of "0" essentially places the effect on the ground. The orbs simply to assist in accurate effect placement and/or effects editing and removal. They're especially helpful when hiding a blowing snow effect inside a hillside for instance (see page 5). When FS is restarted in any year other than **2100 AD**, the orbs disappear entirely. They have no crash perimeters and are for all intents and purposes non-existent thereafter.

Important Note: When the EZ-Scenery "scale slider" set to the default "0" position these orbs are QUITE large, so it's best to reduce the orb scale by moving the EZ-scenery scale slider well to the left until an orb shrinks to an easily manageable size.

Also note that the scale of the orbs, when added or saved to scenery, does not effect the size or general appearance of the final rendered effect. The effect characteristics are fixed in the text parameters within the .fx files themselves (and their respective textures), which reside in the "Effects" folder of your FS9 root folder.

Fire/ Smoke Effects: (All fire/ smoke effects respond accordingly to wind direction and velocity.)

Oilpot Flame & Smoke: Designed for use with the SIRP "Oilpots" by Bill Dick, this effect places an animated small flame with black oil smoke trail. There are two smoke plume heights for variation.
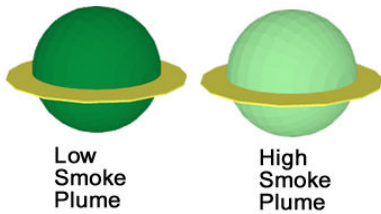

Low Smoke Plume   High Smoke Plume

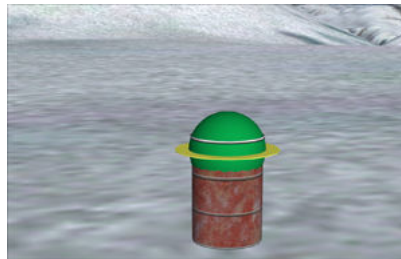Placement Orb Colors   Orb Placement...   ... FS Result

Oil Barrel Flame & Smoke: Perfect for use with Len Hickman's "lens_ez_oil_drums.zip" this effect adds an animated flame and black oil smoke plume. There are two smoke plume heights for variation.

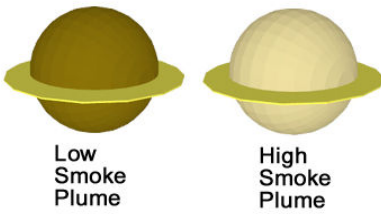Low Smoke Plume   High Smoke Plume

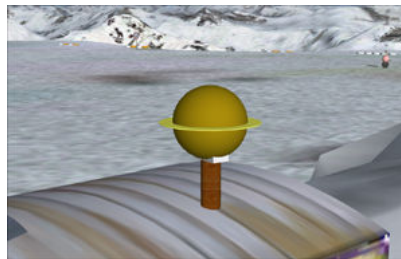Placement Orb Colors   Orb Placement...   ... FS Result

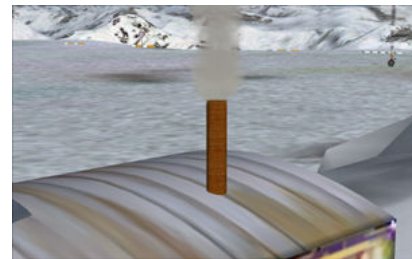**Chimney Smoke:** Adds a gray/yellowish smoke plume for use with cabins and other chimneys. There are two smoke plume heights for variation.

Low Smoke Plume   High Smoke Plume

Placement Orb Colors   Orb Placement...   ... FS Result

Campfire Flame and Smoke: Adds an animated campfire sized flame and a medium sized wood smoke plume. Perfect for campfire pits and bonfires.

Campfire FX Orb   Orb Placement...   ... FS Result

<u>*Blowing Snow Effects:*</u> (All snow effects respond accordingly to wind direction and velocity.)

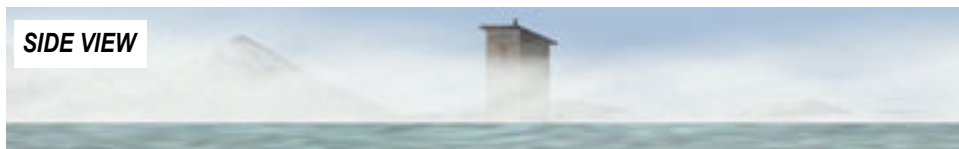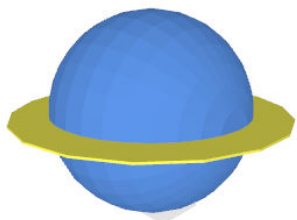**Blowing Snow (Small):** Narrow in width, but high in height...

Orb Color

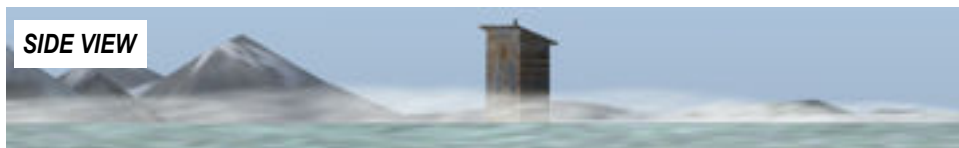**Blowing Snow (Medium):** Medium in width, and medium in height...

Orb Color

Blowing Snow (Large): Wide in width, but low in height...
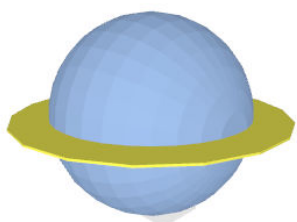
Orb Color

Blowing Snow (Mountain Top): A wispy, translucent effect that emulates snow blown from mountain peaks and snowy ridges. It falls gently with gravity as it fades.


*Orb Color*

Snow Effects Limitations and Placement

Scenery objects and effects in Flight Simulator can be made to show at different times (i.e. year, day, hour, minute, etc.), but unfortunately, there are no apparent parameters to make them show only when the wind blows. Because of this limitation, once the snow effects are added by EZ-Scenery, they will be actively displayed at all times. So, when there is no wind, the sprites naturally hover in place in a "swirling white mass". Thus they need to be "hidden" by another scenery object such as the snowdrifts found in "woody's EZ_rocks_boulders_snowdrifts.zip" by Woody Fout. This factor is the reason for the limitation for their initial and final scale ratios. An example of how to easily "hide" a snow effect is as follows:
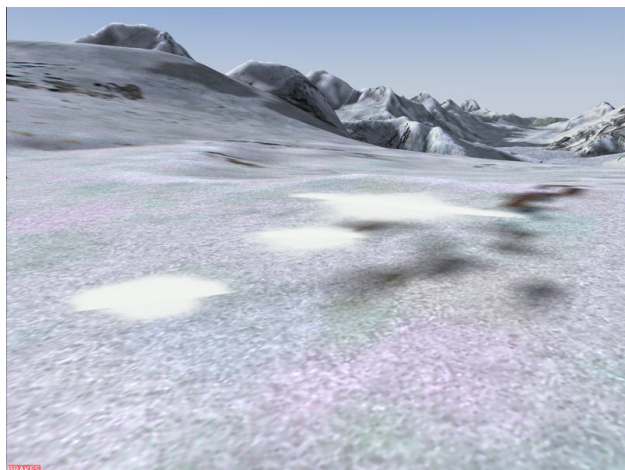
1. Here, three blowing snow effects have been placed on flattened ground, the small, medium, and large respectively, seen from left to right. (Remember, to see the "placement orbs" the year must be set to **2100 AD**, and after placement you must restart Flight Simulator to see the effects).
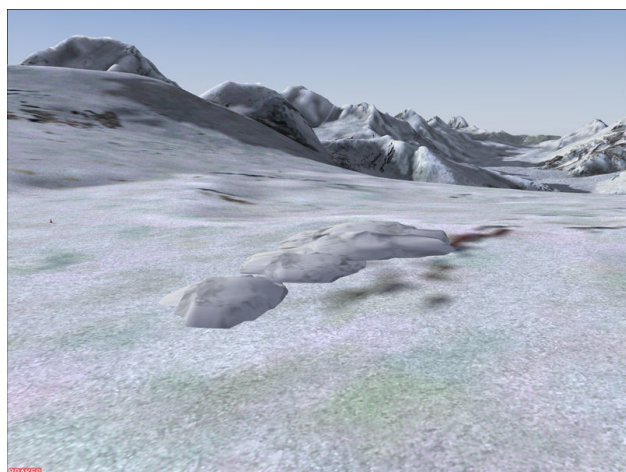

2. Here, the three effects have been covered by snowdrifts from Woody Fouts' "woody's EZ_rocks_boulders_snowdrifts.zip". There is no wind activated in the screenshot at left so they do not move from their snowdrift "cover".
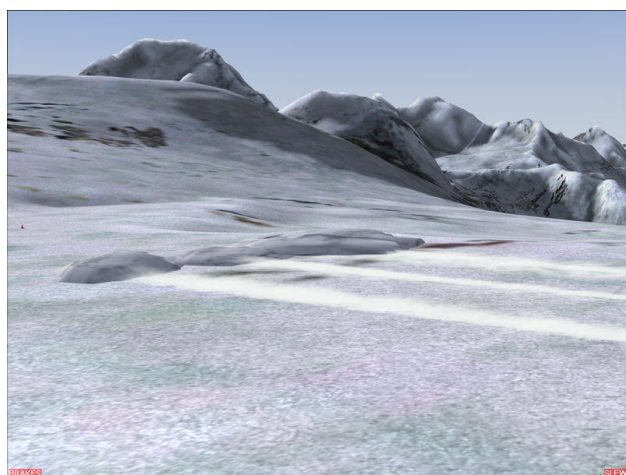
3. Here, the three effects are blowing out from their cover by brisk 16 knot wind from the left. If the wind velocity or direction were to change, the blowing snow will change accordingly. If the wind ceases, they will cease their motion and "settle and dissolve" in short order.

Hiding a Snow Effect in a Hillside

If there are hillsides adjacent to your scenery, the blowing snow effects can be effectively hidden in the hillsides and can be placed so as to blow out at exactly ground level by using the following technique:
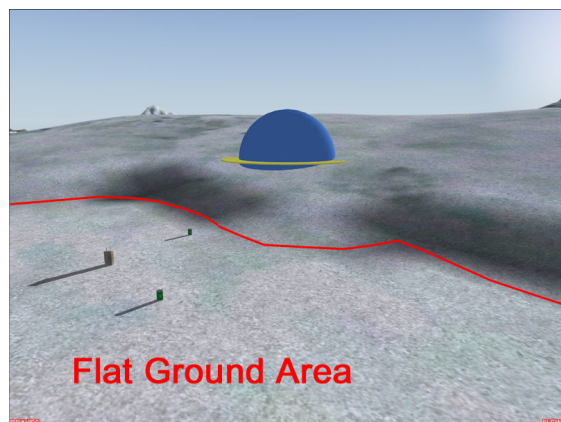
1. Using EZ-scenery, place a snow effect orb at a good enough distance <u>up a hillside </u>so that once the effect is moved underground (in step 2), it will likely hide it's non-wind static appearance.

(In the screenshots at left, the perimeter of the flat ground area is highlighted by a red line).
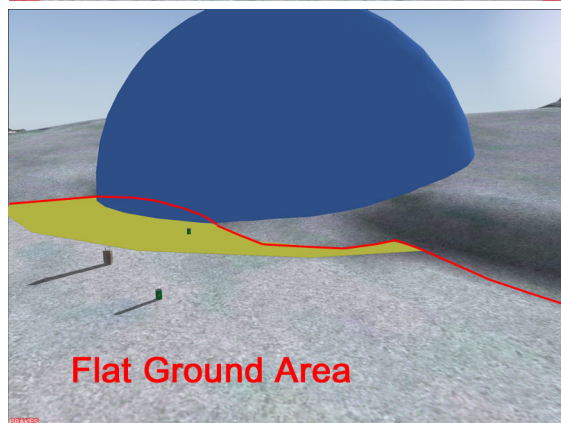
2. Then, expand the scale of the placement orb so that the yellow ring is extends laterally out into the flat ground area you wish for the snow to blow onto. Then, <u>lower the orb's elevation</u> so that the top of the yellow ring is <u>flush</u> with the ground.

(The top of the yellow ring is the exact effect emitter level inside the orb).
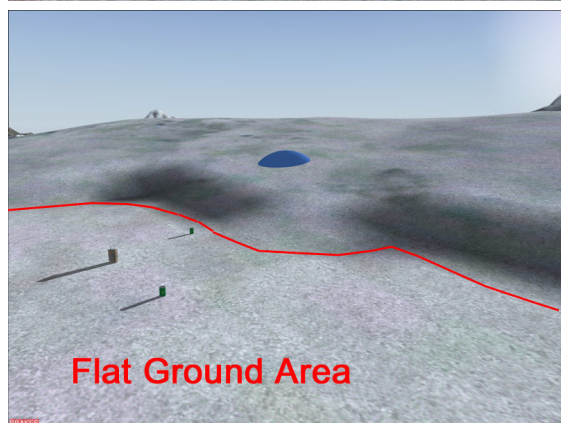
3. Now, decrease the <u>scale</u> of the orb <u>without changing it's elevation</u>, leaving only the "orb placemark" showing above the ground for reference, in case you want to reposition or remove it later on.
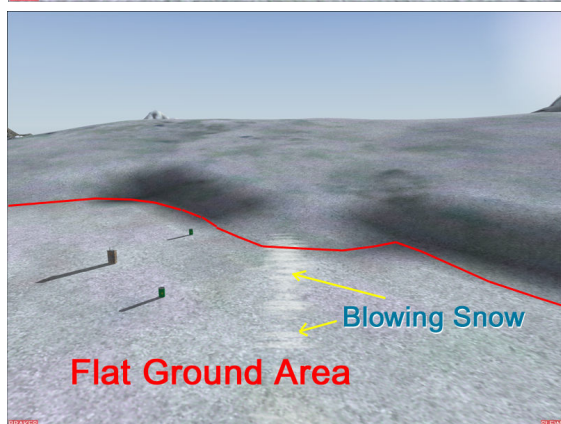
4. The emitter for the snow effect is now buried in the hillside at the same elevation level as your flat scenery area, so when the wind blows from the direction of the hill, the snow effects will emerge from the hillside right at ground level.

Mountain Top Snow Effects

Placing the mountain top blowing snow effect is easy. Just remember to sink the orb about <u>5 meters into the ground</u> (i.e. "–5.0" in the EZ-Scenery elevation dialogue) so that the static non-wind state will be hidden. On summits or ridges with very steep slopes you may have to go a meter or two lower, so that the effect doesn't "bleed" out of the side of the mountain when there's no wind. A little experience with this and you can usually judge the needed depth pretty well.

To place a mountain top blowing snow effect:

Sink effect about 5 meters
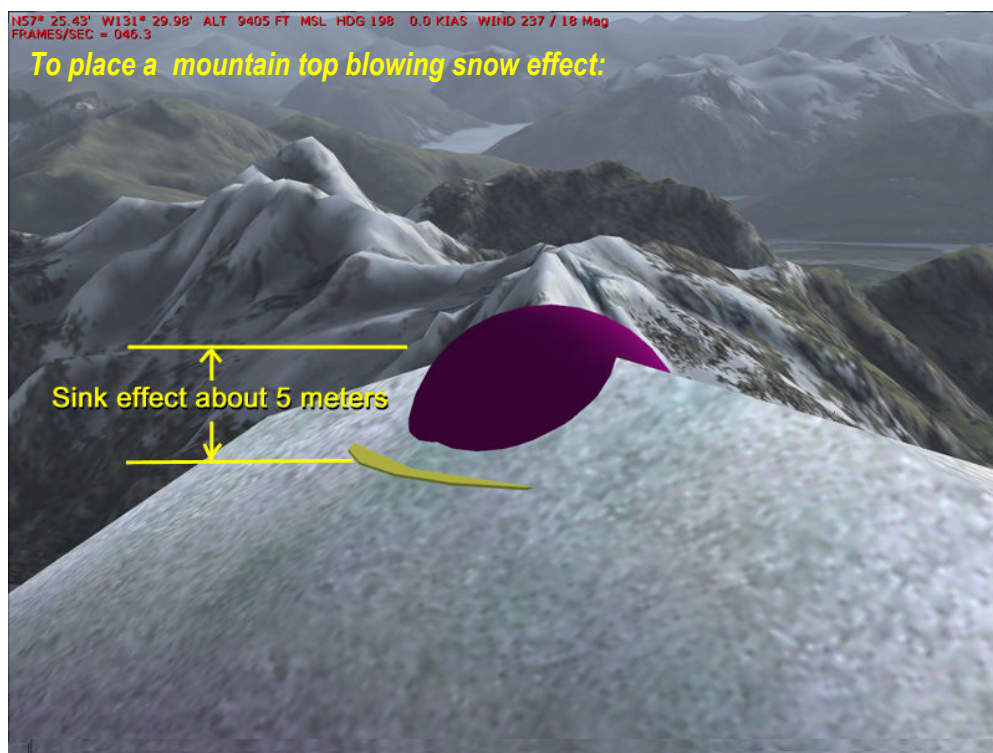
Known Issues

1. The blowing snow effects will sometimes vanish suddenly when seen from certain angles on the ground. This seems to occur more prevalently as the viewer moves further away from the emitter location. If I can track down the reasons for this I will issue an update.

2. Every attempt has been made to make these effects as frame rate friendly as possible. None the less, adding too many smoke and snow effects in one location will result in degraded frame rates. Also the number of sprites emitted by all the effects begins to diminish when too many effects are operating on screen at a given time. Usually about 8-10 smoke effects and a similar number of snow effects in one location are acceptable numbers so far as performance is concerned. This of course is for generally desolate areas where these effects were designed to be used. They have not been tested at locations with a lot of addons or autogen active. They have been tested in FS9 only.

Usage and Distribution

This package is freeware and is intended for non-commercial use for the enjoyment of flight simulator enthusiasts. It may be repackaged in part or in whole so long as credit is given to the author for the files used. It may not be used in any payware package without the expressed permission of the author.

Enjoy!   Ed Truthan   E-mail: edtruthan@frontiernet.net